TECHNICAL REVIEW DOCUMENT
for
MODIFICATION TO OPERATING PERMIT 96OPBO131

Public Service Co – Valmont Station
Boulder County
Source ID 0130001

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June 2003

I. Purpose:

This document establishes the decisions made regarding the requested modification to the Operating Permit for Public Service Company's Valmont Station. This document provides information describing the type of modification and the changes made to the permit as requested by the source and the changes made due to the Division's analysis. This document is designed for reference during review of the proposed permit by EPA and for future reference by the Division to aid in any additional permit modifications at this facility. The conclusions made in this report are based on the information provided in the requests for modification submitted to the Division on June 5 and 24, 2003, e-mail correspondence and telephone conversations with the source. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

II. Description of Permit Modification Request/Modification Type

The Operating Permit for the Valmont Station was issued on September 1, 2001. Public Service Company (PSCo) entered into a Voluntary Emissions Reduction Agreement with the Colorado Air Pollution Control Division that applies to the Denver metro area plants. The agreement took effect on January 1, 2003 and in order to prepare for the agreement PSCo installed a lime spray dryer on the main boiler and added additional equipment for operation of the lime spray dryer. The purpose of this modification is to include the appropriate provisions of the Voluntary Emissions Reduction Agreement and to add the additional emissions units to the Title V operating permit.

Colorado Regulation No. 3, Part C, Section X.A identifies those modifications that can be processed under the minor permit modification procedures. Specifically, minor permit modifications "are not otherwise required by the Division to be processed as a significant modification" (Colorado Regulation No. 3, Part C, Section X.A.6). The Division requires that "any change that causes a significant increase in emissions" be processed as a significant modification (Colorado Regulation No. 3, Part C, Section I.B.36.h.(i)). According to Appendix D of Regulation No. 3 (Section I.F, revisions adopted July 15, 1993, Subsection I.G for modifications) the Division considers that a significant increase in emissions is the potential to emit above the PSD significance levels (15 tons/yr of PM_{10} and 25 tons/yr of PM). Construction permits were issued for all the additional equipment to be added to the facility and the construction permits went through public comment. Permitted emissions for these units are well below the PSD significance levels.

Since the provisions in the Voluntary Emissions Reduction Agreement are State-only requirements and since the agreement has gone through public comment and been approved by the Colorado Air Quality Control Commission (AQCC), the Division considers that adding the provisions of the Voluntary Emissions Reduction Agreement qualifies as a minor modification.

III. Modeling

The Voluntary Emissions Reduction Agreement results in a decrease in SO_2 emissions, therefore, no modeling is required for such a modification. The additional emission units (ash blower, recycle ash silos, recycle ash mixers, lime silos and ball mill slakers) were issued construction permits and the total permitted emissions for these units are well below 2 tons/yr of PM and PM_{10}, therefore, no modeling was required for issuance of the construction permits.

IV. Discussion of Modifications Made

Source Requested Modifications

The Division addressed the source's requested modifications as follows:

Voluntary Emissions Reduction Agreement

The Voluntary Emissions Reduction Agreement specifies (in paragraph 11.(a)) that within one (1) year of the compliance date (January 1, 2003), PSCo shall apply for modifications of the Title V permits issued to the Denver Metro Area Facilities and that the applications shall include only the appropriate provisions contained in the agreement concerning emission limitations, recordkeeping, reporting and regulatory assurance, all as State-Only conditions. Therefore, the Division has included the following sections of the Voluntary Emissions Reduction Agreement in the operating permit as State-Only conditions: paragraphs 2, 5 and 7. Note that the procedure for determining the percent

reduction (exhibit A of the agreement) will be included in Appendix H of the permit.

Although the Voluntary Emissions Reduction Agreement does not specify that any definitions be included in the operating permit, the Division considers that the definitions used in paragraphs 2, 5 and 7 should be included in the operating permit so that the conditions may be more clearly understood.

It is not clear whether the agreement intended that the Nitrogen Oxides requirements (paragraph 3, retire Arapahoe Units 1 and 2) be included in the operating permit. However, the Division considers that since the provision in this paragraph are already included in Colorado Regulation No. 1 and in the Arapahoe Title V operating permit, it is not necessary to include them in this permit.

Additional Emission Units

Units P003 and P004: Two (2) Recycle Ash Silos Each Equipped with a Baghouse and Two (2) Recycle Mixers Each Equipped with a Chemco/Quickdraft Scrubber

Applicable Requirements - The recycle ash silos and the recycle ash mixers are part of the lime spray dryer system that was added to the main boiler in order to meet the requirements in the Voluntary Emissions Reduction Agreement. The ash recycle concept allows the recycle product consisting of a combination of fly ash, calcium sulfates and sulfites, and unreacted lime to absorb additional SO_2, thus increasing the overall efficiency of the removal process. A portion of the ash from the fabric filter dust collector hoppers is conveyed to one of two recycle storage silos. Water and solids from the recycle ash silo are introduced into the recycle ash slurry mix tanks. The recycle ash slurry is then pumped from the slurry mix tank to the head tank above the dry scrubber reactor.

The recycle ash silos are each equipped with a Dynamic Air, Model 84A-100 baghouse. Each baghouse has a 99.9% efficiency for particulate matter removal. Each recycle mixer is equipped with a Chemco/Quickdraft scrubber. The scrubber consists of a baffle box with a water spray and vent fan that knocks particulate matter out of the air stream before it is exhausted to the atmosphere. The scrubber efficiency is 95% for particulate matter removal.

Construction permits were issued for the recycle ash silos (00BORO0815, Initial approval, dated March 27, 2001) and the recycle mixers (00BO0817, initial approval, dated March 27, 2001). The due date of the first semi-annual monitoring and deviation report required by this operating permit will be more than 180 days after the initial approval construction permits 00BO0815 and 00BO0817 were issued and/or commenced operation. Therefore, under the provisions of Regulation No. 3, Part C, Section V.A.2, the Division is allowing the initial approval construction permits to continue in full force and effect and will consider the Responsible Official certification submitted with that report to serve

as the demonstration required pursuant to Regulation No. 3, Part B, Section IV.H and no final approval construction permits will be issued. The appropriate provisions of the initial approval construction permits have been directly incorporated into this operating permit.

The applicable requirements for these units from the construction permits are as follows:

- Visible emissions shall not exceed 20% opacity during normal operation. During periods of startup, process modification or adjustment or occasional cleaning of control equipment, visible emissions shall not exceed 30% opacity for more than six minutes in any sixty consecutive minutes (00BO0815, condition 1 and 00BO0817, condition 1).

  Based on engineering judgment, the Division has not included the opacity requirement for startup, process modification and adjustment of control equipment for the following reasons: 1) startup is instantaneous (begin loading or mixing); 2) process modifications are unlikely since the process of loading and mixing is straightforward and if modifications were to occur, they could not occur while the unit is in operation (i.e. loading or mixing) and 3) the control equipment cannot be adjusted while loading or unloading is occurring.

- Construction of this source must commence within 18 months of initial permit issuance date or within 18 months of date on which such construction or activity was scheduled to commence as stated in the application. If commencement does not occur within the stated time the permit will expire on September 27, 2002 (00BO0815, condition 4 and 00BO0817, condition 4).

  This requirement will not be included since the recycle ash silos and recycle mixers have commenced operation.

- Emissions of air pollutants shall not exceed the following limitations (00BO0815, condition 5 and 00BO0817, condition 5):

  <u>Silos:</u>

PM	9.2 lbs/mo	and	0.055 tons/yr
PM_{10}	9.2 lbs/mo	and	0.055 tons/yr

  <u>Mixers:</u>

PM	43 lbs/mo	and	0.25 tons/yr
PM_{10}	43 lbs/mo	and	0.25 tons/yr

- Raw material processing shall not exceed the following limitations (00BO0815, condition 6 and 00BO0817, condition 6):

  <u>Silos:</u>

Not to exceed 15,000 tons/mo and 180,000 ton/yr

Mixers:
Not to exceed 15,000 tons/mo and 180,000 tons/yr

Note that for the above two conditions, the monthly limits apply during the first twelve months of operation. By the time this modified permit is issued, these silos and mixers will have been in operation for more than twelve months, therefore, the monthly limits will not be included in the operating permit.

In addition, the source requested that since the emissions for the mixer are based on the manufacturer's guarantee for the scrubber and hours of operation, that the production limits for the mixers be removed. Since the emissions are not based on the material processed through the mixers and since the material processed through the recycle mixer sis essentially limited by the processing limits on the recycle ash silos, the Division will remove the processing limits on the recycle mixers.

- APEN reporting requirements (00BO0815, condition 7 and 00BO0817, condition 7)

  The APEN reporting requirements will not be identified in the permit as a specific condition but are included in Section V (General Conditions) of the permit, condition 22.e.

- The permittee shall notify the Division 30 days prior to startup (00BO0815, condition 8 and 00BO0817, condition 8).

  These units have commenced operation and startup notices were submitted for these units, therefore, this requirement will not be included in the operating permit.

- Within one hundred and eighty days (180) after commencement of operation, compliance with the conditions contained on this permit shall be demonstrated to the Division. It is the permittee's responsibility to self certify compliance with the conditions. Failure to demonstrate compliance within 180 days may result in revocation of the permit (00BO0815, condition 9 and 00BO0817, condition 9).

  As discussed previously, the Division will consider that the first semi-annual monitoring report submitted after issuance of this modification will serve as the self-certification that these units can comply with the applicable requirements and this requirement will not be included in the permit.

- Prior to final approval being issued, the applicant shall submit to the Division for approval an operating and maintenance plan for all control equipment and control practices and a proposed recordkeeping format that will outline how the applicant will maintain compliance on an

ongoing basis with the requirement of condition No. 5 and 9 listed above (00BO0815, condition 10 and 00BO0817, condition 10).

This permit condition contains an error, in that the reference to condition 9 above should have been to condition 6. With that said, the operating permit operating permit defines the periodic monitoring required to monitor compliance with the permit conditions. Therefore, this requirement will not be included in the permit.

The Division determined that neither the Regulation No. 1 (Section III.C.1) or Regulation No. 6 (Part B, Section III.C, including opacity) particulate matter standards were applicable to either the ash recycle silos or recycle mixers. The Division does not consider these to be manufacturing processes since the ash is a by-product of operating the boilers and the ash is recycled in the scrubber to control SO_2 emissions from the boilers.

Emission Factors - For the recycle ash silos, the source will use Emission Factors from EPA's Compilation of Emission Factors (AP-42), Section 11.17, Table 11.17-4, Product Unloading - Enclosed Truck, dated January 1995. The emission factors are 0.61 lbs/ton for PM and 0.61 lbs/ton for PM_{10}. Provided the silo baghouses are maintained and operated in accordance with manufacturers' recommendations and good engineering practices, a control efficiency of 99.9% can be applied to the emission calculations.

The emission limits in the construction permit for the recycle mixers is based on the manufacturer's guarantee of 0.015 gr/acf for the scrubber exhaust and the blower design rate of 450 cfm. The Division will include the following emission factors in the operating permit for the recycle mixers:

$$\text{EF (PM and } PM_{10}) = \frac{0.015 \text{ gr/acf} \times 450 \text{ acfm} \times 60 \text{ min/hr}}{7{,}000 \text{ gr/lb}} = 0.058 \text{ lbs/hr}$$

Note that although the Division does not typically allow the use of an emission factor in lbs/hr, since permitted emissions from these units are so low, the Division considers that it is acceptable in this particular case.

Monitoring Plan - In order to monitor compliance with the applicable requirements, the source will be required to monitor and record the quantity of recycle ash processed and the number of hours the mixers are operated and calculate emissions monthly. Compliance with the opacity limitation will be presumed, in the absence of credible evidence to the contrary, provided the baghouses on the silos and the scrubbers on the mixers are operated and maintained in accordance with the manufacturers' recommendations and good engineering practices.

Compliance Status – The source has indicated that these emission units are in compliance with all applicable requirements.

Units P005 and P006: Two (2) Lime Silos and Two (2) Ball Mill Slakers

Applicable Requirements - The lime storage silos and lime slakers are part of the SO_2 scrubber systems that was added to the main boiler in order to meet the requirements in the Voluntary Emissions Reduction Agreement. Pebble size lime is delivered to the plant via self-contained pneumatic truck trailers. The lime is unloaded to the storage silos. The pebble lime flows by gravity through rotary feeders to a ball mill slaker, where it is slaked to a slurry of hydrated lime and water. The lime slurry is then pumped to a head tank above the dry scrubber reactor.

The lime storage silos are each equipped with a Flex-Kleen, Model No. 30-PVB1-9-PRRIIG baghouse. Each baghouse has a 99.9% efficiency for particulate matter removal. Each ball mill slaker is equipped with a Chemco/Quickdraft, Custom Model No. Q5CA-1½ scrubber. The scrubber consists of a baffle box with a water spray and vent fan that act to force the moisture-entrained lime particles to drop out before the air stream is exhausted to the atmosphere. The scrubber efficiency is 95% for particulate matter removal.

Construction permits were issued for the lime silos (00BO0814, initial approval, dated March 27, 2001) and the ball mill slakers (00BO0816, initial approval, dated March 27, 2001). The due date of the first semi-annual monitoring and deviation report required by this operating permit will be more than 180 days after the initial approval construction permits 00BO0814 and 00BO0816 were issued and/or commenced operation. Therefore, under the provisions of Regulation No. 3, Part C, Section V.A.2, the Division is allowing the initial approval construction permits to continue in full force and effect and will consider the Responsible Official certification submitted with that report to serve as the demonstration required pursuant to Regulation No. 3, Part B, Section IV.H and no final approval construction permits will be issued. The appropriate provisions of the initial approval construction permits have been directly incorporated into this operating permit.

The applicable requirements for these units from the construction permits are as follows:

- Visible emissions shall not exceed 20% opacity during normal operation. During periods of startup, process modification or adjustment or occasional cleaning of control equipment, visible emissions shall not exceed 30% opacity for more than six minutes in any sixty consecutive minutes (00BO0814, condition 1 and 00BO0816, condition 1).

  Based on engineering judgment, the Division has not included the opacity requirement for startup, process modification and adjustment of control equipment for the following reasons: 1) startup is instantaneous (begin loading or slaking); 2) process modifications are

unlikely since the process of loading and mixing is straightforward and if modifications were to occur, they could not occur while the unit is in operation (i.e. loading or mixing) and 3) the control equipment cannot be adjusted while loading or unloading is occurring.

- Construction of this source must commence within 18 months of initial permit issuance date or within 18 months of date on which such construction or activity was scheduled to commence as stated in the application. If commencement does not occur within the stated time the permit will expire on September 27, 2002 (00BO0814, condition 4 and 00BO0816, condition 4).

  This requirement will not be included since the lime storage silos and ball mill slakers have commenced operation.

- Emissions of air pollutants shall not exceed the following limitations (00BO0814, condition 5 and 00BO0816, condition 5):

  Silos:

PM	0.34 lbs/mo	and	0.002 tons/yr
PM_{10}	0.34 lbs/mo	and	0.002 tons/yr

  Slakers:

PM	43 lbs/mo	and	0.25 tons/yr
PM_{10}	43 lbs/mo	and	0.25 tons/yr

  In their June 5, 2003 application, the source requested that the emission limits for the lime storage silo be increased to 0.0046 tons/yr. This change will be made in the modified operating permit.

- Raw material processing shall not exceed the following limitations (00BO0814, condition 6 and 00BO0816, condition 6):

  Silos:

Not to exceed	542 tons/mo	and	6,500 ton/yr

  Slakers:

Not to exceed	542 tons/mo	and	6,500 tons/yr

  Note that for the above two conditions, the monthly limits apply during the first twelve months of operation. By the time this modified permit is issued, these silos and slakers will have been in operation for more than twelve months, therefore, the monthly limits will not be included in the operating permit.

  In addition, in their June 5, 2003 modification application, the source requested that the processing rate for the lime storage silos be increased to 15,000 tons/yr. This change will be made in the modified operating permit.

  In addition, the source requested that since the emissions for the ball

mill slakers are based on the manufacturer's guarantee for the scrubber and hours of operation, that the production limits for the slakers be removed. Since the emissions are not based on the material processed through the slakers and since the material processed through the slakers is essentially limited by the processing limits on the lime storage silos, the Division will remove the processing limits on the ball mill slakers.

- APEN reporting requirements (00BO0814, condition 7 and 00BO0816 condition 7)

  The APEN reporting requirements will not be identified in the permit as a specific condition but are included in Section V (General Conditions) of the permit, condition 22.e.

- The permittee shall notify the Division 30 days prior to startup (00BO0814, condition 8 and 00BO0816, condition 8).

  These units have commenced operation and startup notices were submitted for these units, therefore, this requirement will not be included in the operating permit.

- Within one hundred and eighty days (180) after commencement of operation, compliance with the conditions contained on this permit shall be demonstrated to the Division. It is the permittee's responsibility to self certify compliance with the conditions. Failure to demonstrate compliance within 180 days may result in revocation of the permit (00BO0814, condition 9 and 00BO0816, condition 9).

  As discussed previously, the Division will consider that the first semi-annual monitoring report submitted after issuance of this modification will serve as the self-certification that these units can comply with the applicable requirements and this requirement will not be included in the permit.

- Prior to final approval being issued, the applicant shall submit to the Division for approval an operating and maintenance plan for all control equipment and control practices and a proposed recordkeeping format that will outline how the applicant will maintain compliance on an ongoing basis with the requirements of condition No. 5 and 9 listed above (00BO0814, condition 10 and 00BO0816, condition 10).

  This permit condition contains an error, in that the reference to condition 9 above should have been to condition 6. With that said, the operating permit operating permit defines the periodic monitoring required to monitor compliance with the permit conditions. Therefore, this requirement will not be included in the permit.

The Division determined that neither the Regulation No. 1 (Section III.C.1) or

Regulation No. 6 (Part B, Section III.C, including opacity) particulate matter standards were applicable to either the lime silos or lime slakers. The Division does not consider these to be manufacturing processes since the lime is used in the scrubber to control SO_2 emissions from the boilers.

Emission Factors - For the lime storage silos, the source will use Emission Factors from EPA's Compilation of Emission Factors (AP-42), Section 11.17, Table 11.17-4, Product Unloading - Enclosed Truck, dated January 1995. The emission factors are 0.61 lbs/ton for PM and 0.61 lbs/ton for PM_{10}. Provided the silo baghouses are maintained and operated in accordance with manufacturers' recommendations and good engineering practices, a control efficiency of 99.9% can be applied to the emission calculations.

The emission limits in the construction permit for the recycle mixers is based on the manufacturer's guarantee of 0.015 gr/acf for the scrubber exhaust and the blower design rate of 450 cfm. The Division will include the following emission factors in the operating permit for the recycle mixers:

$$\text{EF (PM and } PM_{10}) = \frac{0.015 \text{ gr/acf} \times 450 \text{ acfm} \times 60 \text{ min/hr}}{7{,}000 \text{ gr/lb}} = 0.058 \text{ lbs/hr}$$

Note that although the Division does not typically allow the use of an emission factor in lbs/hr, since permitted emissions from these units are so low, the Division considers that it is acceptable in this particular case.

Monitoring Plan - In order to monitor compliance with the applicable requirements, the source will be required to monitor and record the quantity of lime processed and hours the ball mill slakers are operated and calculate emissions monthly. Compliance with the opacity limitation will be presumed, in the absence of credible evidence to the contrary, provided the baghouses on the silos and the scrubbers on the slakers are operated and maintained in accordance with the manufacturers' recommendations and the permittee's operating experience.

Compliance Status – The source indicated in their June 5, 2003 modification application that the monthly lime processing limit had been exceeded five times. As part of the modification request, the source requested an increase in the lime processing rate for the silos. Therefore, upon approval of this draft permit, the source will be in compliance with the lime processing limit on the silos. Note that since emissions from the ball mill slakers are not based on the quantity of material processed, as discussed above, the lime processing limit for the ball mill slakers will be removed in the modified operating permit.

Unit P007 – Ash Blower System

Applicable Requirements - The ash blower will be used to transport ash from the baghouse hoppers to either the waste ash silo or recycle ash silo, when operational.

A construction permit was issued for the ash blower system (00BO0818, initial approval, dated March 27, 2001). The due date of the first semi-annual monitoring and deviation report required by this operating permit will be more than 180 days after the initial approval construction permit 00BO0818 was issued and/or commenced operation. Therefore, under the provisions of Regulation No. 3, Part C, Section V.A.2, the Division is allowing the initial approval construction permit to continue in full force and effect and will consider the Responsible Official certification submitted with that report to serve as the demonstration required pursuant to Regulation No. 3, part B, Section IV.H and no final approval construction permit will be issued. The appropriate provisions of the initial approval construction permit have been directly incorporated into this operating permit.

The applicable requirements for these units from the construction permits are as follows:

- Visible emissions shall not exceed 20% opacity during normal operation. During periods of startup, process modification or adjustment or occasional cleaning of control equipment, visible emissions shall not exceed 30% opacity for more than six minutes in any sixty consecutive minutes (condition 1).

  Based on engineering judgment, the Division has not included the opacity requirement for startup, process modification and adjustment of control equipment for the following reasons: 1) startup is instantaneous (begin blower system); 2) process modifications are unlikely since the process of using the blower is straightforward and if modifications were to occur, they could not occur while the unit is in operation and 3) the control equipment is integral to the operation of the blower.

- Construction of this source must commence within 18 months of initial permit issuance date or within 18 months of date on which such construction or activity was scheduled to commence as stated in the application. If commencement does not occur within the stated time the permit will expire on September 27, 2002 (condition 4).

  This requirement will not be included since the ash blower system has commenced operation.

- Emissions of air pollutants shall not exceed the following limitations (condition 5):

PM	178.6 lbs/mo	and	1.05 tons/yr
PM_{10}	178.6 lbs/mo	and	1.05 tons/yr

- Raw material processing shall not exceed the following limitations (condition 6):

Not to exceed 5,834 tons/mo and 70,000 ton/yr

Note that for the above two conditions, the monthly limits apply during the first twelve months of operation. By the time this modified permit is issued, the ash blower system will have been in operation for more than twelve months, therefore, the monthly limits will not be included in the operating permit.

In addition, the source requested that since the emissions for ash blower system are based on the manufacturer's guarantee for the system and hours of operation, that the production limits for the ash blower system be removed. Since the emissions are not based on the material processed through the ash blower system and since the material processed through the ash blower system is essentially limited by the processing limits on the waste ash and recycle ash silos, the Division will remove the processing limits on the ash blower system.

- APEN reporting requirements (condition 7)

  The APEN reporting requirements will not be identified in the permit as a specific condition but are included in Section V (General Conditions) of the permit, condition 22.e.

- The permittee shall notify the Division 30 days prior to startup (condition 8).

  This unit has commenced operation and a startup notice was submitted for this unit, therefore, this requirement will not be included in the operating permit.

- Within one hundred and eighty days (180) after commencement of operation, compliance with the conditions contained on this permit shall be demonstrated to the Division. It is the permittee's responsibility to self certify compliance with the conditions. Failure to demonstrate compliance within 180 days may result in revocation of the permit (condition 9).

  As discussed previously, the Division will consider that the first semi-annual monitoring report submitted after issuance of this modification will serve as the self-certification that this unit can comply with the applicable requirements and this requirement will not be included in the permit.

- Prior to final approval being issued, the applicant shall submit to the Division for approval an operating and maintenance plan for all control equipment and control practices and a proposed recordkeeping format that will outline how the applicant will maintain compliance on an ongoing basis with the requirements of condition No. 5 and 9 listed

above (condition 10).

This permit condition contains an error, in that the reference to condition 9 above should have been to condition 6. With that said, the operating permit operating permit defines the periodic monitoring required to monitor compliance with the permit conditions. Therefore, this requirement will not be included in the permit.

The Division determined that neither the Regulation No. 1 (Section III.C.1) or Regulation No. 6 (Part B, Section III.C, including opacity) particulate matter standards were applicable to the ash blower system. The Division does not consider these to be manufacturing processes since the ash is a by-product of operating the boilers.

Emission Factors - The ash blower generates a vacuum that pulls the ash to a filter-separator located on top of the silos. A 125 hp blower generates a vacuum that pulls the ash to a filter-separator located on top of the silos. The ash drops out in the filter-separator and the air is filtered through a fabric filter dust collector before being discharged through the blower. Emissions from the ash blower are estimated using the manufacturer's guaranteed emission rate of 0.01 gr/acf and the blower operation rate of 2,800 cfm. The Division will include the following emission factors in the operating permit for the ash blower system:

$$\text{EF (PM and } PM_{10}) = \frac{0.010 \text{ gr/acf} \times 2{,}800 \text{ acfm} \times 60 \text{ min/hr}}{7{,}000 \text{ gr/lb}} = 0.24 \text{ lbs/hr}$$

Emissions from the ash blower system are considered uncontrolled. Air from the blower is filtered before being exhausted. Since, the blower cannot be operated without the filter system, the filter system is not considered a control device because it is integral to the operation of the unit.

Note that although the Division does not typically allow the use of an emission factor in lbs/hr, since permitted emissions from these units are so low, the Division considers that it is acceptable in this particular case.

Monitoring Plan - In order to monitor compliance with the applicable requirements, the source will be required to monitor and record the number of hours the ash blower system operated and calculate emissions monthly. Compliance with the opacity limitation will be presumed, in the absence of credible evidence to the contrary, provided the ash blower system is operated and maintained in accordance with the manufacturers' recommendations and good engineering practices.

Compliance Status – The source has indicated that these emission units are in compliance with all applicable requirements.

Other Modifications

In addition to the requested modifications made by the source, the Division used this opportunity to include changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this modification.

The Division has made the following revisions, based on recent internal permit processing decisions and EPA comments on other permits, to the Valmont Station Operating Permit with the source's requested modifications. These changes are as follows:

Page Following Cover Page

Removed the reference to dates in the citation (above "issued to" and "plant site location") on the page following the cover page.

Added language specifying that the semi-annual reports and compliance certifications are due in the Division's office and that postmarks cannot be used for purposes of determining the timely receipt of such reports/certifications.

Changed the Responsible Official.

Section I – General Activities and Summary

Revised the language in Condition 1.1 regarding the attainment status of the Denver metro area.

Conditions 13 and 17 in Condition 1.4 were renumbered to 14 and 18 and Condition 21 in Condition 1.6 was renumbered to 22. The renumbering changes were necessary due to the addition of the Common Provisions requirements in the General Conditions of the permit. In addition, removed reference to Section II, Condition 3.9 as a state-only condition. There is no Section II, Condition 3.9 in the permit.

Removed the language in Condition 1.5 addressing Non-Attainment Area major New Source Review (NSR). Since the Denver metro area is no longer a non-attainment area, these provisions do not apply. In addition, this condition was moved to the "new" section 3 for PSD (see below).

Added a "new" Section 3 for Prevention of Significant Deterioration and moved Condition 1.5 into this section as Condition 3.2.

Added a "new" Section 5 for Compliance Assurance Monitoring (CAM) Requirements. Note that although there are emission units that will be subject to CAM requirements, these requirements do not apply until the permit is renewed.

Added a "new" Section 6 for case-by-case MACT (112(j)) requirements.

Section II – Specific Emission Units

General

Removed the "Note" included with the Reg 1, Section II.A.1. opacity requirements in Conditions 4.6, 5.7, 7.4 and 15.1, since the Division considers that this note is not necessary.

Sections II.4 & 5 – Turbine

Condition 4.3 identifies specific ASTM methods to be used for fuel sampling and analysis. Since ASTM methods may be revised or replaced, this condition will be changed to specify that the appropriate ASTM methods, or equivalent, if approved by the Division in advance shall be used to determine the Btu content of the fuel.

Changed the reference to "Section V, Condition 21" to "Section V, Condition 22" in Condition 5.6. The renumbering change is necessary due to the addition of the Common Provisions requirements in the General Conditions of the permit.

Condition 5.7 requires that Method 9 observations be conducted "annually or after 2400 hours of operation in any calendar year, whichever comes first". This language has been somewhat confusing to the inspectors, therefore, the frequency of monitoring has been revised to annually. Since the turbine rarely runs on fuel oil, Method 9 observations have been conducted annually, not every 2400 hrs of operation. Therefore, for all practical purposes this revision is not a relaxation in the monitoring frequency.

Section II.8 – Fugitive Particulate Matter Emissions

Changed the reference to "Condition 21" to "Condition 22" in Condition 8.1. The renumbering change is necessary due to the addition of the Common Provisions requirements in the General Conditions of the permit.

Removed the requirement to certify semi-annually that control measures are utilized to reduce fugitive particulate matter emissions from Condition 8.2. This language implies that a separate certification is required semi-annually. However, the Division had intended that the certification with the semi-annual monitoring reports be used to indicate whether adequate control measures are used to minimize fugitive particulate matter emissions.

Section II.9 – Ash Silo

Revised the equations in Condition 9.1.4 to calculate emissions in tons/mo, rather than lbs/mo.

Section II.11 – Safety Kleen Cold Cleaner Solvent Vats

When the original permit was issued for this facility, cold cleaner solvent vats that met the definition of small remote reservoir units could take the APEN exemption even though the solvent vats were subject to specific requirements in Reg 7. The cold cleaner solvent vats that did not meet the definition of small remote reservoir units could not take the APEN exemption. Therefore, there were two scenarios, one for cold cleaner solvent vats that were small remote reservoir units (no APEN reporting requirements) and those that weren't (subject to APEN reporting requirements). Revisions were made to the "catch-all" provisions in Regulation No. 3 and those revisions became effective on December 30, 2002. With these revisions, an emission unit that is subject to specific Regulation No. 7 requirements can take the APEN and construction permit exemptions. However, an emission unit that is subject to specific Regulation No. 7 requirements cannot be considered an insignificant activity. Therefore Section II.11 was revised to include only one table and to include only the specific Reg 7 requirements (work practice standards and transfer and storage of waste/used solvents).

Section II.13 – Particulate Matter Emission Periodic Monitoring Requirements

Updated the stack testing language in Condition 13.2.

Section II.14 – Continuous Emission Monitoring and Continuous Opacity Monitoring Systems

Revised the language in Condition14.3.2 to indicate that for purposes of monitoring compliance with the Reg 1 SO_2 limit, that hourly SO_2 data be converted to lbs/mmBtu based on Method 19, since Part 75 does not require that hourly SO_2 data be reported in units of lbs/mmBtu.

<u>Section III – Acid Rain Requirements</u>

Revised the Designated Representative

<u>Section IV – Permit Shield</u>

The citation for the permit shield is incorrect. The reference to Part A, Section I.B.43 should be Part A, Section I.B.44 and the reference to Part C, Section XIII should be Part C, Section XIII.B.

Based on comments made by EPA on another permit, the following statements were added after the introductory sentence in Section 1 "In addition, this shield

does not protect the source from any violations that occur as a result of any modification or reconstruction on which construction commenced prior to permit issuance".

Section V – General Conditions

Added language from the Common Provisions (new condition 3). With this change the reference to "21.d" in Condition 20 (prompt deviation reporting) will be changed to "22.d", since the general conditions are renumbered with the addition of the Common Provisions.

Removed the upset and breakdown provisions from Condition 4 (emergency provisions) since they are included in the Common Provisions.

The citation in General Condition 16 (open burning) was revised. The open burning requirements are no longer in Reg 1 but are in new Reg 9. In addition, changed the reference in the text from "Reg 1" to "Reg 9".

Added the requirements in Colorado Regulation No. 7, Section V.B (disposal of volatile organic compounds) to General Condition 28.

Appendices

Revised the description of the insignificant activity category for the emergency power generators (Reg 3, Part C, Section II.E.3.nnn) and stationary internal combustion engines (Reg 3, Part C, Section II.E.3.xxx). In addition, for the water pump (identified in the current permit under the non-road engine exemption), there is no longer a category for emissions < 5 tpy. The Division assumes this engine falls under Reg 3, Part C, Section II.E.xxxx.(i) (< 175 hp and operates < 1,450 hrs/yr).